

### **REMARKS**

Claims 1-18 are pending. Claims 1-18 stand rejected in this Office Action. Applicant is amending claims 1 and 10. Applicant requests reconsideration of claims 1-18 as will be discussed.

Applicant notes that the Office Action depends on additional prior art (Turner) in rejecting claims 1-20.

#### **Specification**

**The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter.**

The Office Action alleges that (Page 2.):

There is no antecedent basis for "computer-readable medium" in the specification showing that the person of ordinary skill in the art at the time the invention was made would have understood the claimed "computer-readable medium" to be an article of manufacture rather than a transmission, signal, carrier wave, etc. If Applicant intends the "computer-readable medium" to be supported by the recitation of "Random Access Memory (RAM)" and/or "Read Only Memory (ROM)" and/or "disk storage units" on page 3 lines 2-15, then Applicant need merely state that on the record.

Applicant intends that "computer-readable medium" be supported by the recitation of "Random Access Memory (RAM)" and/or "Read Only Memory (ROM)" and/or "disk storage units" as disclosed on Page 3, lines 1-15 of the specification in reference to Figure 1. Applicant requests withdrawal of the objection to the specification.

#### **Claim Rejections – 35 U.S.C. § 103**

**Claims 1-2, 4-11, and 13-18 are rejected under 103 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,727,161 (Purcell), U.S. Patent No. 5,727,950 (Cook). U.S. Patent No. 5,372,507 (Goleh), "Software Usability: Choosing Appropriate Methods for Evaluating Online Systems and Documentation" (Mehlenbacher), "Rapid Prototyping: An Alternative Instructional Design Strategy" (Tripp), "Software Engineering Concepts" (Fairley), "A Case Study Using Scenario-Based Design Tools and Techniques in the**

**Formative Evaluation Stage of Instructional Design: Prototype Evaluation and Redesign of a Web-Enhanced Course Interface” (Turner).**

Applicant is amending claim 1 to include the features of “a transformation component providing services for manipulating the state of the simulation, wherein the transformation component performs at least one calculation on the domain and provides a result back to the domain for further analysis by the profiling component” and “a remediation component providing services for a rule-based delivery of feedback to the student, wherein the feedback is based on profiling information from the profiling component.” The amendment is supported by the specification as originally filed. For example, the specification discloses (Page, 10, lines 23-38. Emphasis added.):

**Transformation Component - Whereas the Profiling Component asks questions about the domain, the Transformation Component performs calculations on the domain and feeds the results back into the domain for further analysis by the Profiling Component.** This facilitates the modeling of complex business systems that would otherwise be very difficult to implement as part of the application. Within the Analysis phase of the Interface/Analysis/Interpretation execution flow, the Transformation Component actually acts on the domain before the Profiling Component does its analysis. The Transformation Component acts as a shell that wraps one or more data modeling components for the purpose of integrating these components into a BusSim application. The Transformation Component facilitates the transfer of specific data from the domain to the data modeling component (inputs) for calculations to be performed on the data, as well as the transfer of the results of the calculations from the data modeling component back to the domain (outputs). Figure 6 illustrates a transformation component in accordance with a preferred embodiment. The data modeling components could be third party modeling environments such as spreadsheet-based modeling (e.g., Excel, Formula1) or discrete time-based simulation modeling (e.g., PowerSim, VeriSim). The components could also be custom built in C++, VB, Access, or any tool that is ODBC compliant to provide unique modeling environments. Using the Transformation Component to wrap a third party spreadsheet component provides an easy way of integrating into an application spreadsheet-based data analysis, created by such tools as Excel. The Transformation Component provides a shell for the spreadsheet so that it can look into the domain, pull out values needed as inputs, performs its calculations, and post outputs back to the domain.

The specification further discloses (Page 9, line 31-page 10, line 6. Emphasis added.):

In the simplest terms, the purpose of the Profiling Component is to analyze the current state of a domain and identify specific things that are true about that domain. **This information is then passed to the Remediation Component which provides feedback to the student.** The Profiling Component analyzes the

domain by asking questions about the domain's state, akin to an investigator asking questions about a case. The questions that the Profiler asks are called profiles. For example, suppose there is a task about building a campfire and the student has just thrown a match on a pile of wood, but the fire didn't start. In order to give useful feedback to the student, a tutor would need to know things like: was the match lit?, was the wood wet?, was there kindling in the pile?, etc. These questions would be among the profiles that the Profiling Component would use to analyze the domain. The results of the analysis would then be passed off to the Remediation Component which would use this information to provide specific feedback to the student. Specifically, a profile is a set of criteria that is matched against the domain. The purpose of a profile is to check whether the criteria defined by the profile is met in the domain. Using a visual editing tool, instructional designers create profiles to identify those things that are important to know about the domain for a given task. During execution of a BusSim application at the point that feedback is requested either by the student or proactively by the application, the set of profiles associated with the current task are evaluated to determine which ones are true. Example profiles include: Good productions strategy but wrong Break-Even Formula; Good driving record and low claims history; and Correct Cash Flow Analysis but poor Return on Investment (ROI).

Regarding independent claims 1 and 10, the Office Action alleges that Purcell teaches (Page 3, line 14 – page 4, lines 20):

... (c) managing information flow utilizing a table of components (C1-45 especially "Each spreadsheet page ... numbers of cells" C 1 I L55-65), the components comprising:

- o a domain component providing services for modeling a state of the simulation (C1-45 especially i.e. "plan-model" C3L10-45 or "plan-model being changeable into any of a number of what-if states" Claim 1 or "the sentence changes to state the information represented by the moved-to position" C35L55-C36L5; The person of ordinary skill in the art at the time the invention was made would have understood that this requires monitoring the state of the graph point, where the state is a location such as "over position x" in order to use programming logic/rules to evaluate the state in order to determine the appropriate information to display to the user);

- o a profiling component providing a rule-based evaluation of the state of the simulation (C1-45 especially i.e. "graphic analysis" C3L10-45 or "choosing ... functional relationship ... plan-model" Claim 1 or "the sentence changes to state the information represented by the moved-to position" C35L55-C36L5; The person of ordinary skill in the art at the time the invention was made would have understood that this requires monitoring the state of the graph point, where the state is a location such as "over position x" in order to use programming logic/rules to evaluate the state in order to determine the appropriate information to display to the user);

- o a transformation component providing services for manipulating the state of the simulation (C1-45 especially i.e. "manipulate plan-model data that is controllably organized and manipulated "C3L10-45 or "plan-model being changeable into any of a number of what -if states" Claim 1 or "choosing ... functional relationship ... plan-model wherein a change in the value of said first factor causes a change in the value of said first goal "Claim 1 or "the sentence changes to state the information represented by the moved-to position"C35L55-C36L5; Both manipulating plan-models and changing the stated displayed information are functionally equivalent to manipulating the state of the simulation); and
- o a remediation component providing services for a rule-based delivery of feedback to the student (C1-45 especially i.e. "each of the invention's graphic analyses represents development and delivery of a vast amount of planning and decision making information and value in concise visual format "C33L5-300"providing a first graph ... display said first graph" Claim 1 or "the sentence changes to state the information represented by the moved-to position" C35L55-C36L5; The information being delivered/displayed to the user is feedback determined based on programming logic/rules).

The Office Action alleges that Purcell teaches a domain component, a profiling component, a transformation component, and a remediation component. In reference to the above allegation, the Office Action relates the "monitoring the state of the graph point, where the state such as 'over position x'" to the profiling component. However, it is unclear what is the relationship of the state of the graph point and the alleged components. Purcell fails to discuss a relationship among the domain component, profiling component, transformation component, and remediation component and consequently does not even suggest the features of "a **transformation component** providing services for manipulating the state of the simulation, wherein the transformation component performs at least one calculation on the **domain** and provides a result back to the **domain** for further analysis by the **profiling component**" and "a **remediation component** providing services for a rule-based delivery of feedback to the student, wherein the feedback is based on profiling information from **the profiling component**" as contained in claim 1. (Emphasis added.) Moreover, Cook, Goleh, Mehlenbacher, Tripp, Fairley, and Turner fail to remedy the deficiencies of Purcell.

Applicant is amending independent claim 10 to include the similar features of "a transformation component providing services for manipulating the state of the simulation, wherein the transformation component performs at least one calculation on the domain and provides a result back to the domain for further analysis by the profiling component" and "a remediation component providing services for a rule-based delivery of feedback to the student,

wherein the feedback is based on profiling information from the profiling component.”  
Moreover, claims 2, 4-9, 11, and 13-18 ultimately depend from independent claims 1 and 10.  
Applicant requests reconsideration of claims 1-2, 4-11, and 13-18.


**Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purcell, Goleh, Cook, Mehlenbacher, Tripp, Fairley, and Turner in view of U.S. Patent No. 4,847,784 (Clancey).**

Claims 3 and 12 ultimately depend from claims 1 and 10. Because Clancey does not remedy the deficiencies of Purcell, Goleh, Cook, Mehlenbacher, Tripp, Fairley, and Turner, claims 3 and 12 are patentable for at least the above reasons.

All objections and rejections have been addressed. Hence, it is respectfully submitted that the present application is in condition for allowance, and a notice to that effect is earnestly solicited.

Respectfully submitted,

Date: March 19, 2008

By:   
Kenneth F. Smolik  
Registration No. 44,344  
BANNER & WITCOFF, LTD.  
10 S. Wacker Drive, Suite 3000  
Chicago, IL 60606-7407  
Telephone: 312-463-5000  
Facsimile: 312-463-5001